UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,429	03/30/2001	Sanjay K. Agrawal	CISCP539	9399

26541	7590	10/18/2004

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EXAMINER
TANG, KAREN C

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/823,429	AGRAWAL, SANJAY K.
	Examiner	Art Unit	
	Karen C Tang	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____ .

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	5) ☐ Notice of Informal Patent Application (PTO-152)
Paper No(s)/Mail Date *05/10/2002*.	6) ☐ Other: _____ .

DETAILED ACTION

Drawings

The drawings are objected to because Figures 1A, 1B, 4, 6, 8, and 11 are hard to read and labels are not clear. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described

as set forth in section 102 of this title, if the differences between the subject matter sought to

be patented and the prior art are such that the subject matter as a whole would have been

obvious at the time the invention was made to a person having ordinary skill in the art to which

said subject matter pertains. Patentability shall not be negatived by the manner in which the

invention was made.

I. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Aoki et al. hereinafter Aoki (US 6,757,255) in view of Sajadieh et al.

hereinafter Sajadieh (US 5,654,979).

1. Referring Claims 1 and 23, Aoki discloses:

collecting traffic data at a queue associated with the traffic aggregate over

a time interval refer to Col 3, Lines 1-36;

calculating a traffic profile responsive to the collected traffic data and the

associated rate refer to Col 3, Lines 57-68 and Col 4, Lines 1-8;

calculating a periodic delay for the traffic profile refer to Col 12, Lines 1 –

40 and Col 18, Lines 1-20.

Aoki does not disclose worst-case delay for the traffic profile

Sajadieh discloses worst-case delay for the traffic profile, refer to Col 1,

Lines 20-35, and Col 5, Lines 10-20.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to have combine Aoki and Sajadieh. The suggestion/motivation for doing so would have been that Aoki has mentioned the delay in the system, but does not expressly mentioned the worse case delay. Pinging is designed to determine a network delay at that particular time. By running the network for period time frame, the profile that one gathered for the delay can determine the worst case delay for the traffic profile.

2. Referring to Claims 2, 15, 24, and 28, Aoki discloses wherein the traffic data includes packet size and arrival time of each packet arriving at the queue during the time interval refer to Col 3, Lines 1-36.

3. Referring to Claim 3 and 16, Aoki discloses 3 wherein calculating the profile includes calculating a value of a burst parameter given the associated rate refer to Col 6, Lines 60-68, Col 7, Lines 1-10 and Col 18, Lines 1-20.

4. Refer to Claim 4, Aoki discloses wherein the associated rate is negotiated rate agreed to by a customer sending the traffic data refer to Col 1, Lines 15-25.

5. Referring to Claims 5 and 17, Aoki discloses wherein the profile is a burst-rate profile refer to Col1, Lines 26-35.

6. Referring to Claims 6 and 18, Aoki discloses wherein the periodic worst-case delay is calculated by dividing the burst parameter by a allocated bandwidth associated with the queue refer to Col 17, Lines 4-40, 54-68 and Col 18, Lines 1-20.

7. Referring to Claim 7, Aoki discloses 7 wherein the queue is allotted a share of an output link capacity, said share exceeding the associated rate refer to Col 1, Lines 35-45, Col15, Lines 60-68 and Col 16 Lines 1-12.

8. Referring to Claims 9, 25 and 31, Aoki discloses:

periodically collecting traffic parameters associated with a queue for each of a plurality of routers refer to Col 6, Lines 25-65.

calculating a periodic delay associated with the traffic parameters for said each of a plurality of routers refer to Col 6, Lines 25-68, Col 7, Lines 1-10, Col 12, Lines 1-40, Col 17, Lines 1-40, and Col 18, Lines 1-20.

Aoki does not disclose worst-case delay.

Sajadieh discloses worst-case delay for the traffic profile, refer to Col 1, Lines 20-35, and Col 5, Lines 10-20.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to have combine Aoki and Sajadieh. The suggestion/motivation for doing so would have been that Aoki has mentioned the delay in the system, but does not expressly mentioned the worse case delay. Pinging is designed to determine a network delay at that particular time. By running the network for period time frame, the profile that one gathered for the delay can determine the worst case delay for the traffic profile.

and adding up the delay associated with the routers along the path refer to Col 13, Lines 13-63.

9. Referring to Claim 8, wherein the traffic aggregate is a class of traffic Examiner interprets packet data is traffic aggregate, which is a class of traffic refer to Col 6, Lines 64-68 and Col 7, Lines 1-10.

10. Referring to Claim 10, 21, 26, 30 and 32. Aoki discloses 10 wherein the traffic parameters include a burst parameter and a rate parameter refer to Col 6, Lines 60-68 and Col 7, Lines 1-10.

Referring to Claim 11, Aoki discloses

receiving packets at an input interface refer to Col 6, Lines 1-25.

sending each packet to one of a plurality of streams responsive to a customer identification refer to Col 1, Lines 15-25;

sending each packet in at least one of the plurality of streams to one of a plurality of queues responsive to a class field refer to Col 1, Lines 24-35;

monitoring an arrival time and size of said each packet at the one of the queues during an interval time refer to Col 6, Lines 25-67;

calculating a traffic profile responsive to the arrival time and size of said each packet and the negotiated rate refer to Col 7, Lines 1-10;

calculating a periodic delay for the traffic profile refer to Col 12, Lines 1 – 40 and Col 18, Lines 1-20.

Aoki does not disclose worst-case delay for the traffic profile

Sajadieh discloses worst-case delay for the traffic profile, refer to Col 1, Lines 20-35, and Col 5, Lines 10-20.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to have combine Aoki and Sajadieh. The

suggestion/motivation for doing so would have been that Aoki has mentioned the delay in the system, but does not expressly mentioned the worse case delay. Pinging is designed to determine a network delay at that particular time. By running the network for period time frame, the profile that one gathered for the delay can determine the worst case delay for the traffic profile.

11. Referring to Claims 12 and 13, Aoki discloses:

calculating a burst parameter given the hypothetical link bandwidth allocation refer to Col 17, Lines 53-68 and Col 18, Lines 1-20;

determining a periodic delay for a traffic profile associated with the burst parameter and the hypothetical link bandwidth allocation refer to Col 12, Lines 1-40, Col 17, Lines 53-68 and Col 18, Lines 1-20.

Aoki does not disclose worst-case delay.

Sajadieh discloses worst-case delay refer to Col 1, Lines 20-35, and Col 5, Lines 10-20.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to have combine Aoki and Sajadieh. The suggestion/motivation for doing so would have been that Aoki has mentioned the delay in the system, but does not expressly mentioned the worse case delay. Pinging is designed to determine a network delay at that particular time. By running the network for period time frame, the profile that one gathered for the delay can determine the worst case delay for the traffic profile.

12. Referring to Claims 14 and 20, Aoki discloses:

a monitor that collects traffic data at a queue associated with the traffic

aggregate over a time interval refer to Col 6, Lines 25-67;

a processor refer to Col 6, Lines 13-25. It is inherit that the computer must

have processor to be able to run.

and a computer readable medium coupled to the processor and storing a

computer program comprising: code that causes the processor to receive the

traffic data refer to Col 6, Lines 25-67, Col 9, Lines 15-26;

code that causes the processor to calculate a traffic profile responsive to

the collected traffic data and the associated rate refer to Col 6, Lines 25-68, Col

7, Lines 1-10 ;

and code that causes the processor to calculate a periodic worst-case

delay for the traffic profile refer to Col 7, Lines 1-10, Col 18, Lines 1-20.

13. Referring to Claims 19 and 22, Aoki discloses wherein the computer

readable medium is a CD-ROM, floppy disk, flash memory, system memory hard

drive, or data signal embodied in a carrier wave refer to Col 9, Lines 15-26.

14. Referring to Claims 27 and 29, Aoki discloses

computer code that causes a processor to collect traffic data at the queue

over a time interval, said traffic data having an associated negotiated rate Col 6,

Lines 25-67;

computer code that causes a processor to calculate a traffic profile

responsive to the collected traffic data and the associated negotiated rate refer to

Col 6, Lines 25-68, Col 7, Lines 1-10 ;

computer code that causes a processor to calculate a periodic worst-case delay for the traffic profile and a allocated bandwidth associated with the queue refer to Col 7, Lines 1-10 ;

and a computer readable medium storing said computer code refer to Col 9, Lines 15-26.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US 6,192,032 (Izquierdo discloses a rate attenuation systems, methods and computer program products for reducing low priority video frame packets transmitted over a network)

- US 6,226,266 (Galand discloses end to end delay estimation in high speed communication networks)

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen C Tang whose telephone number is (571)272-3116. The examiner can normally be reached on M-F 7 - 3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571)272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public

PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see http://pair-

direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free).

KT

JOHN PEZZLO
PRIMARY EXAMINER